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ABSTRACT

A review of the literature indicates that although some authors maintain that scholastic aptitude test scores of disadvantaged students are not clearly associated with college grades (Clark and Plotkin, 1963), most researchers have found the opposite to be true. Some selective institutions emphasize the disadvantaged student's persistence, rather than grades, but persistence alone is not a good measure of academic success. Many other institutions ignore test scores and concentrate on high school grades in admitting disadvantaged applicants, though there is ample evidence that grades alone are not a good predictor of academic success because of the differences in the quality of high school education. Aptitude test scores and high school grades, when used together, usually do predict college grades of disadvantaged students about as well as they do for other students. Therefore, admission to selective colleges should be based substantially on test scores and high school grades, regardless of ethnic or socioeconomic background, and the gap between the academic promise of educationally disadvantaged applicants and the usual minimum demands of the institution should not be greater than explicit provisions for remediation, tutoring, coaching, and perhaps curriculum reform can bridge. (AF)

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PREDICTING COLLEGE SUCCESS OF EDUCATIONALLY DISADVANTAGED STUDENTS

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Julian C. Stanley

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ABSTRACT

From a review of the literature the author concludes that admission to selective colleges should be based substantially on test scores and high-school grades, whether or not the applicant is from a minority racial, ethnic, or socioeconomic group. "Open admissions" is seen as applicable to state and local systems of higher education, but not to every individual college and university. Principles of prediction, learning, and guidance would lead to the placement of college applicants into institutions that are not far too difficult or far too easy for each individual. The gap between the academic promise of educationally disadvantaged applicants and the usual minimum demands of the institution should not be greater than explicit provisions for remediation, tutoring, coaching, and perhaps curricular reform can bridge.

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PREDICTING COLLEGE SUCCESS OF EDUCATIONALLY DISADVANTAGED STUDENTS

Because children of the poor tend to score lower on the Scholastic Aptitude Test and other standardized ability and achievement tests than do children of the affluent, one can say that in this descriptive sense such tests are "biased against" or "discriminate against" or "penalize" the former. Besides their descriptive denotations, however, these expressions have value connotations. Are such tests "unfair" to youth from educationally disadvantaging environments? The answer depends, of course, on what is meant in this context by the word "unfair."

During the first half of the past decade a number of writers questioned the validity of standardized tests for ascertaining the abilities of lower-socioeconomic-group children. One of these was President Martin Jenkins (1964) of predominantly black Morgan State College in Baltimore, who wrote: ". . . it is well known that standardized examinations have low validity for individuals and groups of restricted experiential background." That same year Joshua Fishman and others (1964, p. 130), presenting the "Guidelines for testing minority group children" of the Society for the Psychological Study of Social Issues (SPSSI), wrote that the "predictive validity [of standardized tests currently in use] for minority groups may be quite different from that for the standardization and validation groups . . ."

A year earlier Clark and Plotkin (1963) had reported results of a study based on "alumni" classes of the National Scholarship Service and Fund for Negro Students in which they concluded that

> . . . scholastic aptitude test scores are not clearly associated with college grades. It is suggested that college admissions officers weigh test scores less, since they do not predict the college success of Negro students in the same way they do for whites. This study indicates that motivational factors are probably more important than test scores in the demonstrated superiority of Negro students in completing college.

In 1965 Green and Farquhar reported an $\underline{r}$ of only .01 between School and College Ability Test scores (level not specified) and high-school gradepoint averages for 104 black males, compared with .62 for the Differential Aptitude Test verbal-reasoning scores of 254 white males.

Do these excerpts prove that standardized tests indeed have lower predictive validity for educationally disadvantaged college students than for others? By no means, as extensive reviews by Stanley and Porter (1967), Thomas and Stanley (1969), Kendrick and Thomas (1970), Ruch (1970), and Jensen (1970) and articles by Boney (1966), Cleary (1968), Hills and Stanley (1968 and in press), Educational Testing Service (1969), and others show. Only the Clark and Plotkin and Green and Farquhar studies, of those excerpted above,

dealt with data. Cleary tried to replicate the findings of Clark and Plotkin with a better controlled design, but failed. The conclusions of Green and Farquhar are questioned in some detail by Stanley and Porter. For black students, especially, the differential-validity hypothesis has been found untenable, except that sometimes test scores overpredict the academic achievement of the disadvantaged.

For further background and substantiation see Mitchell (1967), Lennon (1968), and APA Task Force on Employment Testing of Minority Groups (1969). Also see Goolsby and Frary (1970).

An Analogous Situation

Let us try to examine the implied logic that leads to assertions such as those made by Jenkins (1964), Fishman et al. (1964), and Clark and Plotkin (1963). We can start with an extreme analogy, using measured height as the "test score" and ability to sink baskets in basketball as the criterion.

Suppose that a short ninth-grader approaches the basketball coach and says something such as the following: "I know that I'm not as tall as any player on the high-school team, but you must make special allowances for me because I never had the opportunity to reach my full height potential. My parents were so poor that even during my mother's pregnancy she did not have an adequate diet. Had I been fed as well as those middle-class boys on the team I'd be as tall as the typical one of them."

The coach might reply: "Yes, maybe you would have been, but in fact you aren't tall enough to play basketball on this team unless either you can sink baskets as well as the taller boys or we can find some way such as an enriched diet to increase your height. I doubt that you can compete with those fellows at your present height. Nevertheless I will give you a brief chance to demonstrate whether or not you can. Also, I have little confidence that at your age we can increase your height greatly, relative to other boys, but of course we can try that, too."

Height in the example is a measure of development at a certain age. From it one cannot infer potential directly. The height score does not tell us <u>why</u> the boy is short. Also, the known height, even in conjunction with the boy's assertions about prolonged, severe malnutrition, does not tell us what the prognosis for increased height is. That is an empirical issue which depends on the methods attempted and the laws of physiology. Within the boy there is no height homunculus waiting to leap upward. There is no pristine "height potential" that has lingered from the point of conception, always waiting to be actualized. One might have to work very hard to increase the boy's height-rank among his peers even a little. It might be more efficient to improve his basket-sinking skill (i.e., make him an "overachiever"), but without the necessary height he may not even then become adept enough to play well on that team. Perhaps he can join a shorter team, where his height falls within the range of his teammates.

Admittedly, some intellectual abilities may not be nearly as

difficult to improve at age 14 or 18 as height probably is, but the underlying principles seem the same. Suppose that one has two large groups of high-school seniors, and that the Scholastic Aptitude Test verbal (SAT-V) score of every person in each group is, say, 400. Suppose, further, that one group is composed of students from inner-city slums; their parents are poorly educated, and most middle-class educational influences are missing from their homes. The students who make up the other group are from affluent suburbs, and most of their parents are college graduates. (To keep the argument uncluttered, let us assume that each student's 400 is essentially his true score, the average of half a dozen SAT scores. Then regression toward population means due to errors of measurement won't complicate our discussion. Also, assume that both groups had plenty of experience taking tests prior to the SAT.)

Which group's scores should be easier to increase? Intuitively, one responds immediately, "The slum group's, because those students had little educational stimulation at home or in the community. Stimulation should work wonders." As with height, however, this is an empirical issue. Even assuming greater SAT potential at the time of conception for the disadvantaged youth, it does not follow that this potential persists undiminished to age 17 or 18. Perhaps the disadvantaged seniors are so stunted intellectually that massive coaching, tutoring, remediation, and enrichment won't raise most of their SAT scores much. Perhaps such efforts will, but one has to specify the methods to be used and actually try them out.

Coaching to Improve Test Scores

Not enough of this has been done yet in a rigorous way and reported, but the study by Roberts and Oppenheim (1966) should alert optimists to be more cautious in their expectations. After conducting an experiment using the Preliminary Scholastic Aptitude Test with 720 eleventh-grade students in 18 predominantly black schools, they concluded that

> The outcome of this study, like those of earlier studies [see College Entrance Examination Board, 1968b] investigating whether coaching can raise aptitude test scores, is essentially negative. The performance of the experimental groups proved to be lower than was expected. Nevertheless, the question of whether one can intervene effectively to supplement the <u>instruction</u> of the culturally deprived high school student persists. Future investigations might concentrate upon the particular learning problems of this population and what techniques might prove to be effective to overcome these problems rather than take the form of additional coaching studies as they have been performed in the past. [Italics added.]

Alternative Coping Skills

Even when it is recognized that we do not know how to increase the tested SAT-V ability of disadvantaged high-school juniors or

seniors appreciably, it is often contended that they don't need as much of this ability as more advantaged students do in order to succeed in college. Seldom is it asked why they would not need more ability. The contender seems to imply that students who have come up the rough way will study harder and more effectively than advantaged students, or perhaps even that by having survived in the ghetto they have developed coping techniques useful also in schools. Of course, these speculations do not square well with the many other disadvantages besides test-score deficit that the slum-bred students have, nor with the facts of their usual academic difficulties in elementary and high school. If strong motivation to achieve academically is there, it must in most instances be lying dormant, ready to spring forth in college. One might expect, or at least hope for, satisfactory college work from a person who has earned good grades in high-school college-preparatory courses or has high-enough test scores. However, to expect good college grades from most students who have neither is asking for a minor academic miracle, unless sufficiently massive compensatory education intervenes. Such miracles do happen from time to time, but there does not seem to be any credible evidence that they occur frequently or when the gaps to be leaped are great.

Persistence to Graduation

A tactic recently adopted at a number of academically selective colleges is to emphasize the disadvantaged student's persistence,

rather than his grades. For example, preliminary data at Cornell University (Tetlow, 1969) show that the 56 students who scored below the 5th percentile "of all entering Cornell students for the undergraduate division in question" on two out of three of SAT-V, SAT-M, and secondary school class rank "are doing extremely well with regards to academic status, and if the trend continues, about ninety percent (90%) will graduate and less than five percent (5%) will be academically dismissed." (At Cornell the 5th percentile on SAT-V in the College of Arts and Sciences is about 535, so most students who score in the lowest 5 percent there are far above the national median SAT-V score of high-school graduates.)

In another part of the report, Dr. Tetlow shows that the average grades of the entire group of presumably high-risk students at Cornell were rather low and that "about half of all students in the program have received at least a warning for poor performance. Several students have received a 'warning,' a 'final warning,' and a 'post-final warning.'" Clearly, more than just persistence to graduation must be demonstrated if such a program is to be considered a success. What have these students learned by the time they graduate, e.g. as measured by the aptitude, achievement, and area tests of the Graduate Record Examination? Would they have learned more had they attended a less academically demanding college where with the same amount of effort they could have made better grades?

In an important study Astin (1970) has used a persistence argument, too, though his pooling of grades across 180 colleges of

various selectivity levels makes some of his conclusions difficult to interpret. He matched ingeniously, also, but within-college analyses would have been more convincing. His findings may have little necessary relevance to disadvantaged students recruited into selective colleges, but they do suggest considerable persistence in college by many students with weak academic backgrounds.

A large study of persistence to graduation at Brown University was reported by Nicholson (1970). His data and conclusions are interesting, although his definition of a high-risk student (i.e., one whose SAT-V score is less than 620) screens in few really educationally disadvantaged persons.

Studies of persistence were also conducted by Clark and Plotkin (1963) and Borgen (1970).

Not many systematic studies of differential persistence of blacks versus whites have yet been completed, but the evidence from Clark and Plotkin, Tetlow, Astin, Borgen, and Nicholson suggests that reasonably able black students from high socioeconomic backgrounds who attend selective colleges persist well to graduation, even though many of them make mediocre or poor grades. Most of these students were self-selected into the colleges, however, rather than being recruited strongly. Also, they had rather few black classmates with whom to isolate themselves from the whites or with whom to agitate for black courses, curricula, departments, and colleges. This situation has changed rapidly within the last few years, so the older data can be suggestive only, and just for blacks. We know virtually

nothing yet concerning the persistence of other disadvantaged minority groups.

The relationship of parental socioeconomic level to academic persistence transcends the race issue. For example, at the University of Illinois Eckland (1964a, 1964b) found that persistence to obtaining a degree somewhere within a ten-year period following initial enrollment was unrelated to socioeconomic level for the abler 60% of the male students. However, for the least-able 40% low socioeconomic status went with low persistence. Their giving up pursuit of the degree did not seem closely related to lack of money; those persons who dropped out for what they said were financial reasons tended to return and graduate. Lack of money is a real handicap, but at least in principle a remediable one.

Mere persistence to the award of a degree cannot, of course, be the primary criterion. The persister must in the process be getting at least as good an education as he could secure elsewhere for the same effort and cost. Careful evaluation of the attainments of the students as they progress seems imperative.

Ignoring Test Scores

Recently, many selective institutions have decided to waive test scores (and sometimes high-school grades, too) in admitting disadvantaged applicants. If the rationale for this is that SAT and College Board achievement tests lower prediction of criteria such as freshman gradepoint average or persistence to graduation, it is a

foolish procedure, because in a multiple-regression equation a predictor variable cannot lower validity, but only increase it or leave it unchanged. (Nonlinear regression might work differently, but it is quite unlikely to occur when the usual academic predictors are employed, as Lee showed in 1957.) Substituting principals' and teachers' ratings of probable college success for test scores and high-school grades appears to be a step backward into the pre-1906 era of college selection. Rather, it would seem more sensible to predict for each applicant the desired criterion, using all available predictors, and then, if desired, to set up predictive lists separately for disadvantaged and non-disadvantaged. Those disadvantaged applicants who on the basis of all evidence seem most promising academically and otherwise can be invited to attend and offered financial aid and, where needed, massive educational facilitation.

I would urge a reversal of the current trend. The more disadvantaged an applicant seems to be socioeconomically, the more objective information one needs about him. What are his weaknesses and his strengths? How, for instance, does he score on several College Board achievement tests? Does he have some special developed academic ability or other relevant aptitude? It is well to consider noncognitive measures, too, but not in lieu of the cognitive ones.

Especially disturbing is the tendency to ignore test scores and put the main reliance on the high-school academic record. As Thomas and Stanley (1969) have reported, and as Thomas is presently studying further as his doctoral dissertation at The Johns Hopkins Univer-

sity, ". . . high school grades do not consistently make the greatest contribution in predicting college grades of black students, perhaps particularly of men, whereas they do for whites. Unreliability of grade reporting, invalidity of grades in high school, restriction in range due to selection processes, and intergroup differences in personality characteristics [are] advanced to explain this phenomenon."

Predictive Validity

As noted earlier, aptitude test scores and high school grades, when used together, usually do predict college grades of disadvantaged applicants about as well as they do for regular ones. This is a carefully verified general finding, but of course it depends on the relative range of talent in the two groups. At Cornell, for instance, first-semester _r_'s for the special-program students tended to be lower than for all Arts and Sciences freshmen; however, data for the former were from a pooled four-year period, whereas for the latter they were for a single year. Heterogeneity of grades and grading across the years may have lowered the _r_'s (see Tetlow, 1969, Table 5). Also, although there is no way to tell from the report how comparatively homogeneous the two groups are, it seems quite likely that test scores and perhaps high school grades of the special-program students were considerably less variable than were those of the regularly admitted students. If so, the difference in _r_'s was probably due to restriction of range, rather than to invalidity of the tests. A single regression equation might predict college grades

equally well for the two races there.

Many claims that test scores have little or no value for predicting the "success" of disadvantaged applicants to colleges are made. Anecdotes are abundant (e.g., see Somerville, 1967), but usually upon investigation they cannot be verified or prove to be atypical. An admissions officer ignores test scores at his institution's peril. They certainly are useful most of the time for helping to predict college grades, and also probably for helping predict which students who persist through a highly permissive selective college will come out with an education, rather than just a quickly discredited union card.

Biased Items?

The important issue of item "bias" was attacked vigorously but largely unsuccessfully in the early 1950's by Eells and others (1951). Those investigators worked hard to devise a "culture-fair" test, one that would still be predictively valid but that would not discriminate so sharply between socioeconomic classes as, for example, the Otis Test of Mental Ability does. Its situations and items, incorporated into the Davis-Eells "Games," were slanted toward urban slum cultures; nevertheless, the new test served as about an effective differentiator of socioeconomic classes as its culturally "unfair" predecessors had been. (E.g., see Ludlow, 1956.)

A more recent study by Cleary and Hilton (1968) revealed a statistically significant but small interaction of race (black versus

white) with the items of two forms of the Preliminary Scholastic Aptitude Test. As Stanley (1969c) showed later, a considerable amount of this interaction was due to a few items that were too difficult for both races and hence did not separate them much. There seemed little likelihood that one could find in either subtest (verbal or mathematical) of the PSAT a subset of item types especially favorable or unfavorable to the blacks, who scored rather uniformly lower than the whites on most of the items.

For a long time it has been well known to specialists that blacks score relatively higher on verbal items than on nonverbal ones (e.g., see Lesser, Fifer, and Clark, 1965, and Lesser and Stodolsky, 1967). Hence, attempts to create valid culture-fair tests by reducing their verbal content have slight chance of being successful. One can, of course, find tests such as speed of tapping that may not differentiate socioeconomic levels or races well, but they probably will not predict desired academic criteria adequately, either.

Where the criteria are loaded in certain ways--"biased," if you insist--the predictors must be loaded similarly if they are to correlate well with those criteria. If the criteria change (e.g., from grades to persistence with any minimal academic record whatsoever), the predictors must be changed accordingly.

Tacitly Different Criteria

It follows almost as a corollary that if the correlation of certain fixed predictors with a criterion is different for one group

versus another, the criterion itself may well be different for the two groups, even though it has the same name (e.g., gradepoint ratio or receiving a diploma). For example, to predict persistence to graduation of "high-risk" applicants to a college may require considerable knowledge of the grading practices, liberal tentencies, "gut" courses, and fail-safe curricula within the institution. Also, one may need quite different, or at least differently weighted, predictors of persistence to graduation of disadvantaged applicants than for predicting achievement-test scores of those persons in May of their senior year.

Following Up Dropouts and Persisters

In an important sense, the percentage of a college's entering freshmen who persist to graduation there in four or five years may be an excellent measure of its selective and nurturing efficiency. This should, it seems to me, be supplemented by careful assessment of what each graduate has learned and what each does subsequently. High-risk entrants can be treated separately from regular ones. Dropouts can be followed so that the quitters can be separated from the transferers. With excellent computer facilities in many institutions and the work of Eclkand (1964a, 1964b) as an early example, perhaps many colleges will broaden their criteria beyond first-semester or first-year gradepoint average. Getting through to a degree is a kind of sine qua non, but obtaining at least as good an education as one might have secured with the same expenditure of money

and energy elsewhere is crucial. I fear that in the rather frantic recruitment of disadvantaged students, especially blacks, into selective colleges and universities their education itself may sometimes have been lost sight of.

Academic Frustration

If the SAT, College Board tests, and other such instruments measure essentially the same developed abilities for the disadvantaged and advantaged, as they indeed seem to do, and if at least a certain minimum level of such abilities is virtually essential for success in a given college, how can students far below the barely-acceptable level of a given college avoid being seriously frustrated academically there? This is not a question of color or ethnic background, but instead of academic competence, and of course the person's prior grades in school must usually be weighted heavily in assessing that competence.

If your son or mine scores 400 on SAT-V, 400 on SAT-M, and ranks far below the top of his high-school class, he is a poor academic bet for highly selective colleges such as Cal Tech, Harvard, Stanford, and Swarthmore. Wise parents would not want him to go there, even if by some leniency or error he were to be admitted. It is not that he could not <u>possibly</u> pass carefully selected courses there and get some sort of degree, because a <u>few</u> heroically motivated persons at that level might.

Rather, we would fear that trying to compete far above his com-

fortable level would confine him to the easier courses and curricula, thereby limiting his choice. Also, though he might scrape through most of his courses with C's and D's, what would he be learning, relative to what he might learn in another college where his relative level of ability is average or better? And what sort of self-concept would he be developing as low man on the academic totem pole? With these considerations in mind, probably we would urge him to attend a college more geared to his level of academic competence. Not many colleges in the United States are highly selective. There exist at least 2000 others of all sorts to accommodate most levels of developed ability and achievement.

Enrollees Quite Underqualified Academically

A considerable number of minority-group students with weak academic preparation are being lured into the most selective colleges and universities in the country; there the SAT and CEEB scores of many such recruits may be several standard deviations below the average non-special student, and even far below the minimum level for regular admission to the institution. Also, their high-school education and achievement are typically an additional handicap. Most colleges do not publish comparative figures for special versus regularly admitted students, but by being diligent one can get a few statistics such as the following:

Kendrick (1968, p. 8) infers from the Coleman Report that "not more than 15 percent and perhaps as few as 10 percent of . . . Negro

high school seniors would score 400 or more on the verbal section of the SAT. Only 1 or 2 percent would be likely to score 500 or more" (italics his). For all high-school seniors in the country the percentages are approximately 45 and 20, respectively (CEEB, 1968a, p. 23). Thus the number of black high-school graduates each year who have well-developed verbal ability is quite small. As we noted earlier (Tetlow, 1969), the 5th percentile of SAT-V scores for freshmen in the College of Arts and Sciences at Cornell University is 535. Brown University (Nicholson, 1970, p. 3) uses a cutoff of 620 on SAT-V to define those students who are considered academic risks there! "Such a point defines approximately the lower one-third of currently admitted students . . ." Only about 3% of all the freshmen admitted to Johns Hopkins in recent years scored below 500 on SAT-V, and this figure includes disadvantaged applicants given special consideration.

Cornell University may have the ablest large group of black college students in the country, if SAT scores are used as the criterion. In an undated booklet entitled "Expanding Opportunities for Minority Groups" (Cornell University, circa 1968, p. 6) the verbal means of the special-program (chiefly black) entering freshmen for 1965-66 through 1968-69 are shown to range from 530 to 570, whereas the College of Arts and Sciences freshmen range from 660 to 703; the average difference between the blacks and the entire A & S group was 137 points. No standard deviations are given, but this difference seems likely to be at least two of the standard deviations of the

black group. The lowest SAT-V scores for the 247 blacks were reported by year as 430, 340, 400 and 383.

In the fall of 1967 Michigan State University enrolled "66 not-normally-admissible Negro freshmen . . . [m]ore than half [of whom] had combined Scholastic Aptitude Test scores [i.e., SAT-V + SAT-M] of under 789" (Sabine, 1968, pp. 11, 14). No comparative figures for regularly admitted freshmen are given, but the following informal remarks by Dr. Sabine on page 13 indicate the discrepancy:

> May 28 [1968]: Lunch with four faculty members who want to "do something," meaning tutor Negro freshmen next fall. Their ideas are good, and all went well until they started saying how high the students' grades and test scores should be. They had a hard time believing we haven't even one that high in our special-admission group.

For the University of Illinois during the academic year 1968-69 Humphreys (1969) reported "a difference between the means of the two races that was 2.4 times the standard deviation of the Caucasian distribution." Bowers (1970) provides detailed comparisons of the 111 Special Educational Opportunities Program (SEOP) men and 152 women with the regular Illinois freshmen on eight test variables and high-school rank. For the latter, the SEOP students were considerably below the regular students, also. Admissions officers have known for many years that a double handicap of this kind (i.e., ranking low on <u>both</u> aptitude and high-school record within an entering class) makes

for pessimistic academic prognosis.

Humphreys (1969) forcefully stated the dilemma Illinois faced:

> There will be an intolerable level of dropping of Negro students on academic grounds during the first year unless there is massive intervention. A desirable form of intervention is to establish special sections and special remedial courses. An undesirable form is for the faculty to assign grades in racially mixed classes on the basis of skin color rather than performance. In the present emotional climate, if more desirable forms of intervention are not sufficiently massive, this second type becomes inevitable.
>
> There is another effect of bringing in Negro students who are far below their fellow students in readiness to do academic work. A group of young people who are newly imbued with pride in race are placed in a situation in which they are, by and large, obviously inferior. A scientist qualifies this inferiority by adding "at their present stage of development," but this is slight consolation to the student involved. The causal chain from frustration to aggression is well established. A large ability difference as a source of aggression cannot be ignored. The universities are damned if they don't admit more Negroes, but they are also damned in another sense if they do. [Italics added.]

Academic Frustration Accentuates Demands for Relevance?

Stanley (1969a, 1969b, 1970) is more pessimistic than Humphreys about the efficacy of remediation, tutoring, and coaching during the freshman year for overcoming large gaps. Also, he suspects that demands for "relevant" "black" courses and instructors are to a considerable extent probably unconscious rationalizations of pressures of competition with regular students who are much better qualified academically. If the available curricula are too difficult, students must demand easier curricula, fail, or leave. One's pride is saved, however, by not admitting (even to oneself) how almost impossibly difficult the regular courses and curricula are, but instead by searching for nobler-sounding motives. Some statements by a black assistant dean of students at Cornell University and her assistant (Joseph and Newsom, 1968) are relevant to this conjecture:

> [The black students'] interest in making sure that their course work is relevant--a word they use with even more frequency than white students--has the fervor of a religious cause. It is not, however, a "white" relevance they seek . . . [A black student] commented, "Most courses aren't interesting to me. I find it difficult to study them. They are relevant to white students, but not to black students." . . . They define relevant courses as those taught by Negroes . . . or by professors who understand and take account of the Negro contribution and

> point of view . . . [B]y far the largest number are in the College of Arts and Sciences. And there it is courses in economics, sociology, psychology, and the humanities that arouse their passions most. [Italics added.]

Are "white physics," "white engineering," and "white premed" deemed irrelevant largely because they are too difficult for many specially admitted students? It is not easy to assess the contribution of academic unreadiness to demands for segregated curricula, departments, and colleges; however, recent events at a number of colleges seem consonant with the interpretation that it plays more than a minor role in activities which effectively reduce the competition with better-prepared students.

Less-Selective Colleges Need Assistance

A dilemma is that power, resources, and good will seem to reside chiefly at the academically difficult institutions, whereas the real higher-education opportunities for many of the disadvantaged are at state colleges, certain private colleges, community colleges, and the less selective state universities. Over the years of this century the principle that a high-school graduate will usually be wise to attend a college neither extremely difficult nor extremely easy for him seems to have been validated rather thoroughly. The educationally disadvantaged should be treated as individuals, and not as a species apart from the advantaged. They--especially blacks, Mexican-

Americans, American Indians, and Puerto Ricans on the mainland--deserve special consideration and special treatment: financial aid, remediation and tutoring, reduced course loads, extended probation, counseling, etc. There is, however, no magic in a degree from a usually selective college if it is not in one's preferred field, if it represents little real educational attainment, or of the recipient has convinced himself that he is stupid and others that his entire racial or ethnic group is vastly inferior to the typical students in the college.

We need massive federal and local aid to put resources such as scholarships, loans, and counselors where they are most likely to yield the greatest educational increments. A number of persons, among them Economics Professor John Owen at Johns Hopkins, are devising model federal scholarship programs that will include the disadvantaged. It should be unnecessary for those disadvantaged students who prefer not to major in racial or ethnic politics or social studies to attend a prestigious, highly selective college in order to get financial support because a more appropriately difficult college can help them little financially.

Admission and Facilitation

Nothing in this paper should be taken to mean that the writer believes that no persons from disadvantaging backgrounds should be in selective colleges. Clearly, some of them will be well served academically, socially, and emotionally there. I advocate treating

each college applicant as an individual, rather than primarily as a member of a group. Logically, that leads to essentially "color-blind" and "ethnic-blind" admission to college, but by no means color-blind or ethnic-blind facilitation thereafter. Special open admission of applicants quite academically underqualified for the particular college as it presently exists will surely necessitate new, easier curricula for that college--certainly not just even "massive" remediation and tutoring. College officials who doubt this statement will quickly learn by perhaps bitter experience.

High-school rank in class, academic-aptitude test scores, and achievement test scores are still our best predictors of grades the applicant would earn in a particular college and, probably, of his fruitful persistence there. I do not know any convincing evidence that different predictors or even differently weighted predictors of current criteria of academic success are needed for the disadvantaged versus the advantaged. Probably we need more test information about the disadvantaged than about the advantaged, as discussed earlier.

For the public schools, McPartland (1970) has concluded that the presence of a high percentage of academic and value pacesetters within the individual classroom is essential for stimulating the disadvantaged to greater achievement. If his findings generalize to colleges, pacesetters in the classes seem needed. McPartland does not think that a mixture of whites with blacks is crucial, however, because he wrote: "There is no question but that the desegregated Negro students could have experienced the same kinds of rewards and

gains had they switched from the usual segregated school to another all-black school which enrolled students from highly educated and economically advantaged families. In practical terms, though, there simply are not presently enough advantaged black families to accomplish social class desegregation without racial desegregation" (p. 22).

Predicting Occupational Level

It is easy to be persuaded that school grades and test scores do not predict "life success." There is a basic flaw in such an argument, as a few examples will illustrate. Suppose you know about a group of children, as Lewis Terman did in his famed "genius" study, their Stanford-Binet IQ's. If those IQ's range from 140 upward, averaging 150, would you predict their adult occupational level to be average? Of course not. Analogously, what is the probability that out of 1000 carefully tested eight-year-old boys who have IQ's of 90 there will emerge even one professional mathematician, physicist, or Ph.D.-degree recipient?

Suppose that for the year 1950 high-school graduating classes of 100 students or more you knew the names and present addresses of three males in each class, the top-ranking one, the one who ranked nearest the middle, and the one who ranked nearest the bottom. Wouldn't you be quite willing to bet differentially about subsequent education, occupational level, and even income of the three groups?

The usual fallacy in this type of argument arises because it seems to be true that among those persons who, for instance, exactly

complete high school--no more and no less--it is difficult to find strong correlations of grades or test scores with measures of life success. Reflect, though, that by eliminating those persons who drop out before high-school graduation and those who attend college we have homogenized the group considerably with respect to motivation, socioeconomic status, intellectual ability, and many other characteristics. That restricts predictive possibilities greatly. Grades and test scores are rather potent predictors of continuation in school, which in turn leads to increased occupational level and, usually, also to increased lifetime earnings (but not invariably, of course, because for example a plumber may have a larger annual income than a physicist, and begin drawing it four or more years earlier).

Increasing Educational Mobility

It may pay us to view the central problem more broadly. How can inter-generational educational mobility be fostered? How can the children of the uneducated poor of any race or ethnic background be given a better educational chance than they will usually get if not aided? Many such children suffer compound disadvantagement: educationally unstimulating homes, poorly developing academic abilities, lack of financial resources, and community influences (especially including peers) that are educationally disabling. Our nation is struggling with the problems of helping such youngsters develop their abilities and school motivation more effectively from the point of conception onward. Much more must be done far earlier than the

eleventh or twelfth grade if efforts there are to become increasingly successful. A current dilemma is that our present knowledge and funds all along the line are so limited that we tend to cream off the top of the nominally disadvantaged groups. We do not often get down to the really disadvantaged. They present so many problems of finance, motivation, and curriculum that we tend to fight over the more malleable slightly disadvantaged instead.

That word "disadvantaged" gets us into trouble, anyway. From the standpoint of the admissions officer of a given college, who are the educationally disadvantaged? Perhaps they are simply those applicants to his college who, on the basis of all available information including socioeconomic status, race, ethnic origin, and available financial support, are likely to have appreciably more academic difficulty than the typical minimally admissible student. From this viewpoint, the son of a distinguished alumnus is "disadvantaged" if he is predicted to fail most of his courses and not persist to graduation. The brilliant high-school valedictorian whose parents are illiterate and penniless but who has a sizable national scholarship cannot, by this criterion, be considered disadvantaged. Likewise, the high-achieving son of a black physician cannot be considered disadvantaged simply because of his color.

Definition of collegiate disadvantagement as low predicted gradepoint average, based on all available antecedent information, immediately alerts the institution to compensatory action that must be taken quickly if the applicant is admitted. How much financial

aid will it take to improve the academic prognosis sufficiently? If the applicant is black and from an educationally and socially disadvantaging background relative to the usual freshmen at the college, what must be done to improve his academic chances there? If he is from a remote part of Appalachia, what facilitation does he need?

This rationale makes the expression "educationally disadvantaged" or "high risk" more than a euphemism for "minority-group member." It goes beyond the peeling paint on the house or the father's poor education to assess more directly the educational promise of the applicant with all his handicaps and assets, and his probable achievement if some of the handicaps can be removed.

Concluding Remarks

In this paper I have covered, usually too briefly, far more topics than the title promised. It is a complex area, and current practice often seems to me most unwise. This decade will tell about that, however. The many "natural experiments" in open admissions can be informative, though perhaps often traumatically so. Unfortunately, objective evidence from most of them will be ruled out for all except a few concerned insiders because of delicate political considerations. If the College Board can devise ways to collect and share information from the many special programs without jeopardizing the positions of perhaps insecurely placed persons who administer them, it may hasten needed corrective measures. Meanwhile, we must rely mainly on news media, intercepted within-college reports, alumni

PR releases, and an occasional article in a journal such as the College Board Review or a paper at a professional meeting to discern vaguely how much fire there is under all that smoke.

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Some Notes by Dr. Kenneth B. Clark

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in Response to the Preceding Paper

Professor Stanley does not directly answer the task of prediction posed in the title of his paper. A careful reading suggests that he believes that standardized test scores and high school grades are as effective in predicting success for disadvantaged students as they are for more privileged students, but all attempts to determine the empirical base on which this general feeling rests lead only to such general statements as,

> Grades and test scores are rather potent predictors of continuation in school . . .
>
> Probably we need more test information about the disadvantaged than about the advantaged . . .
>
> . . . To expect good college grades from most students who have neither (good grades in high school and high test scores) is asking for a minor academic miracle, unless sufficiently massive compensatory education intervenes.

Presumably, all of the ideas brought together by Professor Stanley lead him to the conclusion that "aptitude test scores and high school grades, when used together, usually do predict college grades of disadvantaged applicants about as well as they do for regular ones," and the novel suggestion that "the more disadvantaged an applicant seems to be socioeconomically, the more objective information one needs about him."

If one analyzes and seeks to understand the point of view of Professor Stanley's paper, the dominant theme which emerges, and which is stated in a number of ways throughout the paper, is that Professor Stanley does not believe that special open admissions and compensatory educational programs are generally likely to be successful, even with massive educational remediation provided for the disadvantaged students at the college level. He is explicit in saying that most of these youngsters who have been educationally deprived throughout their elementary and secondary education will be unable to compete academically, will be frustrated, will resort to demands for "relevant" black studies programs which will be mere devices for avoiding more demanding curricula, and probably will create difficulties and trouble in the colleges to which they will be admitted. Professor Stanley is pessimistic, if not fatalistic, about these programs. Throughout this pessimism there is the very strong suggestion that probably the only realistic way of dealing with education for the disadvantaged is through setting up for

them segregated community and non-"selective" colleges. This argument is clearly against attempts on the part of prestigious academically selective colleges to open their doors to the educationally disadvantaged.

I am personally concerned about the relationship between these ideas on the admissions policies of colleges and universities, which are largely ideas in defense of the status quo, and specific answers to the very important issue raised in the title of Professor Stanley's paper. The issue raised by him can either be answered by empirical evidence or not. Professor Stanley does not provide any adequate evidence concerning this question. The discussion of what type of higher education should be provided for disadvantaged students is a discussion of a policy matter. Of course, policy decisions of this sort must be backed up by the necessary program and procedural changes which will increase the chances of success. But Professor Stanley believes that such policy and procedural changes will not increase the chances of educating any substantial percentage of students on a single standard of college education. I disagree with him, and I believe that the evidence which will come from serious open admissions programs will support my point of view and refute Professor Stanley's.

Another disturbing thing about Professor Stanley's paper, and my comments about it, is that Professor Stanley and I have not defined, with any degree of precision, the term "disadvantaged"

or even "educationally disadvantaged." Although he refers also to the occasional slow child of the affluent disadvantaged as used generally in the paper as a mixture of low scores and minority status, particularly when combined with low-income status. He describes "compound disadvantagement" as including "educationally unstimulating homes, poorly developing academic abilities, lack of financial resources, and community influences (especially including peers) that are educationally disabling." Maybe a more objective and relevant definition of such educationally disadvantage among otherwise normal children would be one which emphasizes that deprivation is the consequence of inadequate elementary and secondary education. The school has the primary responsibilities for educating the child. With this approach to the nature of the disadvantaged student, then it would seem to follow that effective programs for such students would meet the following requirements:

1. Select such students as demonstrate high motivation to continue in college as a measure of the potential to overcome earlier educational deficiencies;

2. Provide for such students the type of specialized compensatory and remedial education programs, with the necessary personnel, materials, and facilities to aid them in overcoming past educational deficiencies as quickly as possible;

3. Try to move such students into full programs based on a high standard of collegiate education as quickly as possible.

There is no reason to believe that a systematic program which provides the necessary resources in money, personnel, and commitment could not increase substantially the proportion of previously educationally disadvantaged youngsters in our colleges and help them to make constructive contributions to our society.

Finally, as colleges, prestigious and selective or otherwise, embark upon such serious programs, it will soon become clear that they will have to employ their influence and their educational power to raise the standards of elementary and secondary education in the public schools in order to prevent them from producing hundreds of thousands of educationally disadvantaged youngsters annually. If this were done, it would remove all bases of Professor Stanley's pessimism that now suggests that educational disadvantage in teenagers is as irreversible as stunted growth, and hopefully, would provide him with other alternatives for such students than educationally segregated post-secondary education.